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8-15-1957

Frequencies of Daily Occurrence of Maximum and Minimum Temperatures at Pierre, South Dakota Each Week of the Year by Five Degree Intervals Together with Highest and Lowest Temperature Recorded and Standard Deviation of Temperatures Each Week of the Year

Ray F. Pengra

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Agricultural Economics
Pamphlet No. 90

August 1957

FREQUENCIES OF DAILY OCCURRENCE OF MAXIMUM AND MINIMUM
TEMPERATURES AT PIERRE, SOUTH DAKOTA EACH WEEK OF THE YEAR
BY FIVE DEGREE INTERVALS TOGETHER WITH HIGHEST AND LOWEST
TEMPERATURE RECORDED AND STANDARD DEVIATION OF TEMPERATURES
EACH WEEK OF THE YEAR

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ACKNOWLEDGMENT

This report was made possible as a result of the cooperative project by the South Dakota Agricultural Experiment Station, the U. S. Weather Bureau and the U. S. Reclamation Service to place South Dakota weather data on I.B.M. punch cards.

TABLE OF CONTENTS

	Page
Introduction	2
Week Numbers With Inclusive Dates	3
Map Showing Location of Station	4
FREQUENCY WEEKLY DISTRIBUTION OF DAILY MAXIMUM TEMPERATURES FOR PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED AND STANDARD DEVIATION OF DAILY TEMPERATURE	
Week Number 45 through 3	5
Week Number 4 through 14	6
Week Number 15 through 25	7
Week Number 26 through 36	8
Week Number 37 through 44	9
FREQUENCY WEEKLY DISTRIBUTION OF DAILY MINIMUM TEMPERATURES FOR PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED AND STANDARD DEVIATION OF DAILY TEMPERATURE	
Week Number 45 through 3	10
Week Number 4 through 14	11
Week Number 15 through 25	12
Week Number 26 through 36	13
Week Number 37 through 44	14

INTRODUCTION

Frequencies of daily maximum and minimum temperatures are shown by five degree intervals for each week of the year for Pierre, South Dakota, covering the years 1892 through 1955.

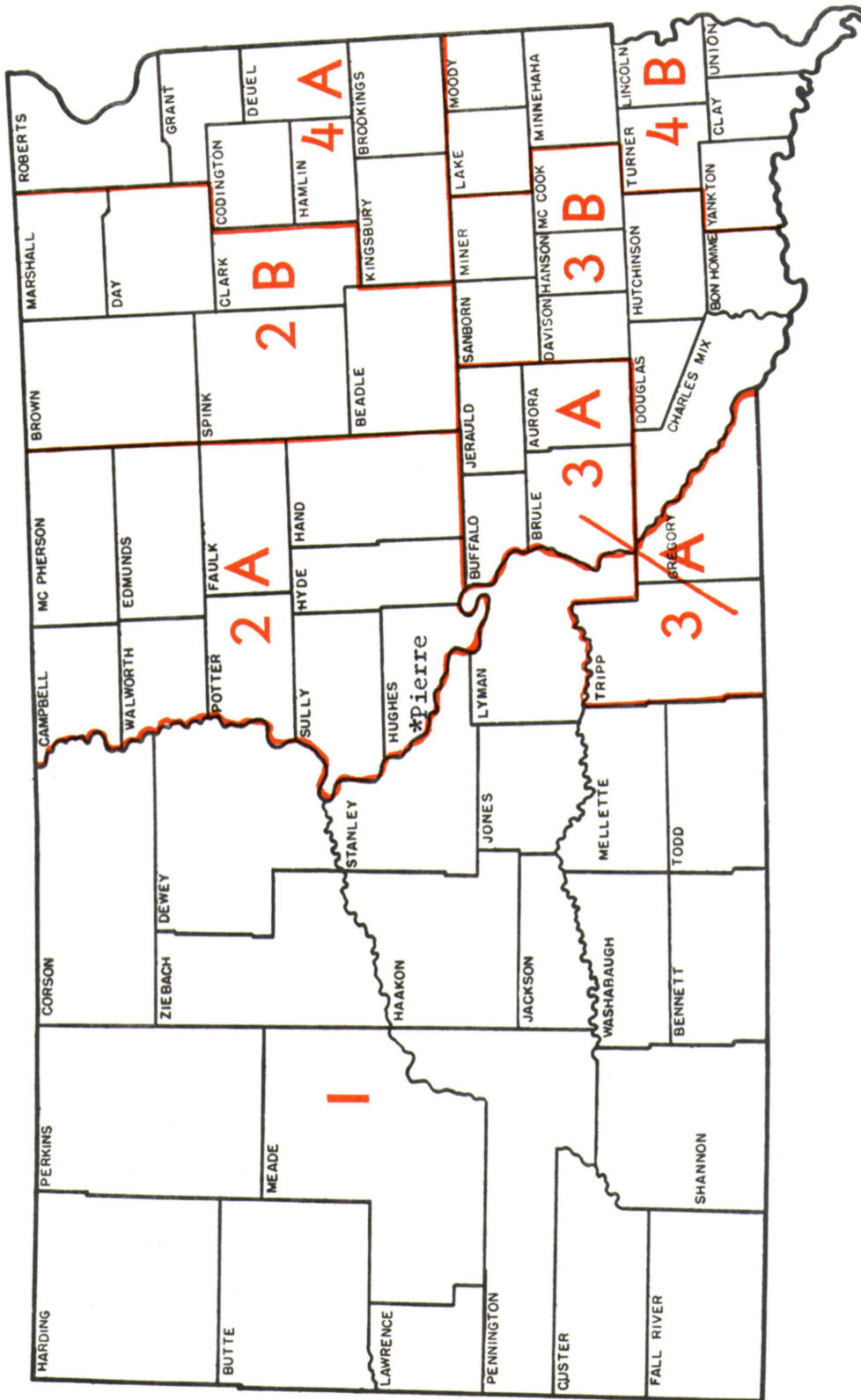
Weeks are numbered starting March 1 in order to have each week over the entire period represent the same calendar dates. For table of week numbers and corresponding calendar dates see page three.

Week 45 includes calendar dates January 3 through January 9 and is shown first in the table in order for the table to present the data approximately in calendar year order.

At the bottom of each page highest and lowest temperatures within each category together with the standard deviation of the daily temperatures are given.

Week Numbers with Inclusive Dates

Week Number	Beginning Date	Ending Date	Week Number	Beginning Date	Ending Date
01	Mar. 1	Mar. 7	28	Sept. 6	Sept. 12
02	Mar. 8	Mar. 14	29	Sept. 13	Sept. 19
03	Mar. 15	Mar. 21	30	Sept. 20	Sept. 26
04	Mar. 22	Mar. 28	31	Sept. 27	Oct. 3
05	Mar. 29	Apr. 4	32	Oct. 4	Oct. 10
06	Apr. 5	Apr. 11	33	Oct. 11	Oct. 17
07	Apr. 12	Apr. 18	34	Oct. 18	Oct. 24
08	Apr. 19	Apr. 25	35	Oct. 25	Oct. 31
09	Apr. 26	May 2	36	Nov. 1	Nov. 7
10	May 3	May 9	37	Nov. 8	Nov. 14
11	May 10	May 16	38	Nov. 15	Nov. 21
12	May 17	May 23	39	Nov. 22	Nov. 28
13	May 24	May 30	40	Nov. 29	Dec. 5
14	May 31	June 6	41	Dec. 6	Dec. 12
15	June 7	June 13	42	Dec. 13	Dec. 19
16	June 14	June 20	43	Dec. 20	Dec. 26
17	June 21	June 27	44	Dec. 27	Jan. 2
18	June 28	July 4	45	Jan. 3	Jan. 9
19	July 5	July 11	46	Jan. 10	Jan. 16
20	July 12	July 18	47	Jan. 17	Jan. 23
21	July 19	July 25	48	Jan. 24	Jan. 30
22	July 26	Aug. 1	49	Jan. 31	Feb. 6
23	Aug. 2	Aug. 8	50	Feb. 7	Feb. 13
24	Aug. 9	Aug. 15	51	Feb. 14	Feb. 20
25	Aug. 16	Aug. 22	52	Feb. 21	Feb. 27
26	Aug. 23	Aug. 29	53	Feb. 28	Feb. 29
27	Aug. 30	Sept. 5			



Location of Station

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MAXIMUM TEMPERATURES FOR
 PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
 AND STANDARD DEVIATION OF **DAILY** TEMPERATURE
 1892-1955

Temperature Intervals	Week Number										
	45	46	47	48	49	50	51	52	1	2	3
115-119											
110-114											
105-109											
100-104											
95- 99											
90- 94											
85- 89											2
80- 84											5
75- 79							1		1	2	6
70- 74						1	1	1	4	10	10
65- 69				1	1	4	6	4	17	16	20
60- 64	3	2	7	6	5	4	6	17	11	31	32
55- 59	6	8	14	10	13	13	17	24	18	22	37
50- 54	18	24	22	18	22	17	32	34	37	45	52
45- 49	35	31	37	34	26	42	37	40	46	44	46
40- 44	65	64	51	28	43	43	49	42	65	57	57
35- 39	52	64	43	39	45	47	45	51	50	52	55
30- 34	49	46	47	54	46	51	58	46	44	55	42
25- 29	37	33	41	41	39	42	43	58	49	36	31
20- 24	46	45	40	39	52	38	47	44	40	29	18
15- 19	32	32	39	37	35	25	22	31	25	18	15
10- 14	35	23	29	28	38	39	29	18	15	13	10
5- 9	19	28	29	36	30	21	16	15	12	7	3
0- 4	24	22	20	30	15	16	15	5	7	4	
-5- -1	16	9	12	25	13	13	6	4			
-10- -6	3	5	9	11	13	13	3	1			
-15- -11	1	3	1	4	3	4	1				
-20- -16		2			2	2					
Total	441	441	441	441	441	435	434	435	441	441	441
Highest	60	62	64	66	65	73	75	70	76	79	85
Lowest	-11	-20	-12	-15	-18	-20	-12	-8	1	1	5
Std. Dev.	15.66	16.06	16.77	17.50	17.06	17.67	16.15	15.29	15.31	15.50	15.57

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MAXIMUM TEMPERATURES FOR
 PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
 AND STANDARD DEVIATION OF DAILY TEMPERATURE
 1892-1955

Temperature Intervals	Week Number										
	4	5	6	7	8	9	10	11	12	13	14
115-119											
110-114											
105-109										1	
100-104							1		3	4	2
95- 99							4	8	4	8	11
90- 94	1			4	1	2	11	13	16	13	25
85- 89	1	3	4	6	14	17	26	33	43	52	46
80- 84	11	10	12	22	34	47	27	33	45	64	66
75-79	8	10	19	43	39	40	47	59	77	81	78
70- 74	19	20	41	44	63	52	64	77	85	66	81
65- 69	23	31	34	42	61	53	65	68	73	70	59
60- 64	39	50	65	71	53	63	69	55	44	35	33
55- 59	48	53	56	64	62	58	59	41	25	28	23
50- 54	45	54	67	48	49	40	34	34	20	13	12
45- 49	37	51	61	45	35	21	17	13	6	5	4
40- 44	56	60	32	34	19	26	16	7		1	1
35- 39	48	50	29	13	11	9	1				
30- 34	47	24	16	5		3					
25- 29	32	9	5								
20- 24	14	10									
15- 19	8	6									
10- 14	3										
5- 9	1										
0- 4											
-5- -1											
-10- -6											
-15- -11											
-20- -16											
Total	441	441	441	441	441	441	441	441	441	441	441
Highest	90	86	87	92	94	94	103	99	103	105	103
Lowest	9	15	27	31	36	31	37	42	45	44	44
Std. Dev.	15.84	14.12	12.77	12.88	12.32	13.56	12.35	12.00	10.77	10.84	10.86

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MAXIMUM TEMPERATURES FOR
PIERCE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
AND STANDARD DEVIATION OF DAILY TEMPERATURE
1892-1955

Temperature Intervals	Week Number										
	15	16	17	18	19	20	21	22	23	24	25
115-119							2				
110-114				2	3	2	3	3	3	6	
105-109		1	5	9	14	13	23	15	11	10	5
100-104	6	13	21	19	34	29	48	50	43	30	31
95- 99	15	30	39	54	60	66	69	77	58	61	62
90- 94	35	63	63	85	92	98	90	86	91	91	95
85- 89	49	56	82	70	94	102	92	98	93	83	87
80- 84	75	94	85	96	71	81	62	63	65	82	86
75- 79	98	82	74	60	48	37	41	36	54	49	44
70- 74	64	53	42	33	21	17	9	13	23	24	24
65- 69	47	32	21	14	8	3	3	4	6	7	8
60- 64	40	14	6	2	3		2	1	1	4	6
55- 59	10	1	2	1						1	
50- 54	2	2	1								
45- 49											
40- 44											
35- 39											
30- 34											
25- 29											
20- 24											
15- 19											
10- 14											
5- 9											
0- 4											
-5- -1											
-10- -6											
-15- -11											
-20- -16											
Total	441	441	441	445	448	448	444	446	448	448	448
Highest	103	109	108	110	110	113	115	111	110	114	106
Lowest	54	53	53	59	63	66	61	64	62	58	61
Std. Dev.	9.86	9.68	9.70	9.22	9.16	8.30	9.08	8.88	9.32	9.47	8.95

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MAXIMUM TEMPERATURES FOR
PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
AND STANDARD DEVIATION OF DAILY TEMPERATURE
1892-1955

Temperature Intervals	Week Number										
	26	27	28	29	30	31	32	33	34	35	36
115-119											
110-114	1										
105-109	6	2	2								
100-104	20	24	13	6	2						
95- 99	60	47	23	21	6	9	1				
90- 94	64	76	47	36	39	20	11	4	3	2	
85- 89	96	84	65	51	49	33	28	26	10	3	
80- 84	78	72	72	73	73	66	38	38	24	6	1
75- 79	60	45	60	65	54	67	62	52	32	28	10
70- 74	31	53	73	78	59	55	75	66	53	42	30
65-69	20	28	40	43	52	67	63	69	59	50	42
60- 64	10	14	30	43	37	46	64	59	58	50	57
55- 59	1	3	13	15	42	40	38	52	64	63	68
50- 54	1		9	11	25	25	40	35	51	53	56
45- 49			1	4	8	14	19	24	38	52	49
40- 44				1	2	3	7	14	26	44	43
35- 39				1		1	1	8	19	29	39
30- 34							1	1	10	17	19
25- 29									1	3	17
20- 24										4	5
15- 19										2	3
10- 14											
5- 9											
0- 4											
-5- -1											
-10- -6											
-15- -11											
-20- -16											
Total	448	448	448	448	448	446	448	448	448	448	439
Highest	110	105	108	104	104	98	96	93	93	92	81
Lowest	52	56	49	38	41	37	34	33	25	16	15
Std. Dev.	9.93	10.47	11.60	11.67	12.56	12.12	11.84	12.33	13.11	13.67	13.10

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MAXIMUM TEMPERATURES FOR
 PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
 AND STANDARD DEVIATION OF DAILY TEMPERATURE
 1892-1955

Temperature Intervals	Week Number							
	37	38	39	40	41	42	43	44
115-119								
110-114								
105-109								
100-104								
95- 99								
90- 94								
85- 89								
80- 84	1							
75- 79	1	1						
70- 74	12	9	2	2	2			
65- 69	25	19	6	6	1		1	1
60- 64	35	30	13	13	4	4	3	1
55- 59	42	49	30	30	17	4	9	7
50- 54	77	72	58	58	43	27	22	17
45- 49	59	51	69	69	47	41	47	35
40- 44	45	45	72	72	55	48	73	43
35- 39	43	51	52	52	50	66	57	69
30- 34	41	42	48	48	49	48	51	55
25- 29	23	22	34	34	42	61	55	61
20- 24	17	17	27	27	37	42	35	37
15- 19	9	21	15	15	25	29	32	44
10- 14	9	8	6	6	31	24	31	16
5- 9		4	8	8	11	24	15	22
0- 4	1		1	1	17	18	12	16
-5- -1			1	1	10	7	3	16
-10- -6						4	2	5
-15- -11								1
-20- -16								
Total	440	441	442	442	441	447	448	446
Highest	81	75	72	72	74	63	67	66
Lowest	4	5	-1	-1	-4	-9	-10	-11
Std. Dev.	13.13	14.55	13.11	13.11	14.51	14.94	13.10	14.52

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MINIMUM TEMPERATURES FOR
PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
AND STANDARD DEVIATION OF DAILY TEMPERATURE
1892-1955

Temperature Intervals	Week Number										
	45	46	47	48	49	50	51	52	1	2	3
85-89											
80-84											
75-79											
70-74											
65-69											
60-64											
55-59											
50-54											
45-49									1	2	3
40-44	1						2	2	3	6	15
35-39	4	5	5	6	5	7	11	13	17	20	26
30-34	21	17	20	9	13	25	28	38	47	79	78
25-29	32	36	34	31	40	44	46	56	77	80	96
20-24	54	58	55	33	48	45	59	53	59	68	61
15-19	51	60	43	49	42	46	52	49	50	65	57
10-14	58	51	50	49	44	51	48	59	55	42	38
5- 9	48	42	53	51	46	42	43	47	48	29	32
0- 4	45	48	50	41	41	38	48	42	26	18	20
-5- -1	39	42	43	39	52	44	36	35	28	14	9
-10- -6	33	38	39	56	41	25	28	20	24	11	2
-15- -11	25	23	16	39	30	27	15	14	5	6	4
-20- -16	17	11	21	24	24	25	11	4	1	1	
-25- -21	11	6	9	11	9	10	6	2			
-30- -26	2	2	3	3	4	4					
-35- -31		1			1	2	1				
-40- -36		1			1	1					
Total	441	441	441	441	441	436	434	434	441	441	441
Highest	40	39	38	39	36	37	42	44	45	48	46
Lowest	-29	-36	-28	-28	-40	-39	-32	-22	-18	-16	-14

Std. Dev.

14.43 14.16 14.50 14.69 15.26 15.01 14.35 13.44 12.88 11.95 10.15

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MINIMUM TEMPERATURES FOR
PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
AND STANDARD DEVIATION OF DAILY TEMPERATURE
1892-1955

Temperature Intervals	Week Number										
	4	5	6	7	8	9	10	11	12	13	14
85-89											
80-84											
75-79											1
70-74							1			2	1
65-69							6	6	9	10	18
60-64					2	8	10	20	24	46	63
55-59				5	8	20	28	31	52	77	114
50-54	1	3	5	23	44	63	58	77	112	124	109
45-49	6	8	28	43	57	76	76	93	104	102	86
40-44	26	38	64	72	97	85	97	111	82	52	38
35-39	45	63	83	99	104	98	89	64	44	22	11
30-34	81	106	111	90	76	52	58	29	13	5	
25-29	91	100	89	66	38	29	14	8	1		
20-24	65	67	34	29	15	9	4	2		1	
15-19	53	18	20	12		1					
10-14	28	23	6	2							
5- 9	26	10	1								
0- 4	9	5									
-5- -1	7										
-10- -6	2										
-15- -11	1										
-20- -16											
-25- -21											
-30- -26											
-35- -31											
-40- -36											
Total	441	441	441	441	441	441	441	441	441	441	441
Highest	52	54	54	59	60	64	70	68	69	71	79
Lowest	-12	0	8	12	20	18	22	22	25	24	35
Std. Dev.	10.80	9.11	8.01	8.63	8.01	8.73	8.65	8.23	7.50	7.30	7.04

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MINIMUM TEMPERATURES FOR
 PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
 AND STANDARD DEVIATION OF DAILY TEMPERATURE
 1892-1955

Temperature Intervals	Week Number										
	15	16	17	18	19	20	21	22	23	24	25
85-89					1		1				
80-84	1		3	6	6	5	3	7		1	1
75-79		4	7	10	13	12	21	15	13	10	2
70-74	5	19	24	38	54	50	67	56	46	33	31
65-69	28	52	63	89	106	118	110	121	101	96	90
60-64	76	126	129	127	133	148	122	153	155	147	156
55-59	128	111	118	106	91	83	84	66	101	109	104
50-54	115	92	82	51	36	27	34	26	27	43	49
45-49	68	33	12	15	7	5	2	1	5	7	12
40-44	17	4	2	3	1					2	3
35-39	3		1								
30-34											
25-29											
20-24											
15-19											
10-14											
5- 9											
0- 4											
-5- -1											
-10- -6											
-15- -11											
-20- -16											
-25- -21											
-30- -26											
-35- -31											
-40- -36											
Total	441	441	441	445	448	448	444	445	448	448	448
Highest	80	79	81	84	85	83	85	84	78	81	81
Lowest	39	41	38	42	44	45	46	45	46	44	43
Std. Dev.	6.54	6.49	6.66	7.06	6.63	6.00	6.59	6.16	5.88	6.22	6.01

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MINIMUM TEMPERATURES FOR
PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
AND STANDARD DEVIATION OF DAILY TEMPERATURE
1892-1955

Temperature Intervals	Week Number										
	26	27	28	29	30	31	32	33	34	35	36
85-89											
80-84											
75-79	4	3	1	1							
70-74	29	22	14	5	2						
65-69	61	49	29	19	3	3	1				
60-64	126	102	72	34	23	13	8	3			
55-59	123	102	96	74	51	37	14	11	3	2	
50-54	71	106	106	118	79	73	47	38	14	6	1
45-49	26	51	76	92	110	110	97	78	49	17	7
40-44	6	12	41	60	97	99	115	100	78	54	24
35-39	2	1	10	32	53	72	87	97	95	111	77
30-34			3	11	20	29	46	79	102	112	118
25-29				2	9	11	24	31	64	76	91
20-24						1	8	7	28	40	65
15-19					1		1	4	13	13	28
10-14									2	8	18
5- 9										4	8
0- 4										4	2
-5- -1										4	
-10- -6											
-15- -11											
-20- -16											
-25- -21											
-30- -26											
-35- -31											
-40- -36											
Total	448	448	448	448	448	448	448	448	448	448	439
Highest	77	77	78	77	72	68	67	61	56	57	51
Lowest	39	39	31	26	19	21	15	15	11	-1	0
Std. Dev.	6.77	7.33	7.96	8.39	8.11	8.09	7.97	8.07	8.36	8.85	8.37

FREQUENCY WEEKLY DISTRIBUTION OF DAILY MINIMUM TEMPERATURES FOR
PIERRE, SOUTH DAKOTA, HIGHEST AND LOWEST TEMPERATURE RECORDED
AND STANDARD DEVIATION OF DAILY TEMPERATURE
1892-1955

Temperature Intervals	Week Number							
	37	38	39	40	41	42	43	44
85-89								
80-84								
75-79								
70-74								
65-69								
60-64								
55-59								
50-54								
45-49	2	4		1				
40-44	14	11	6	2				
35-39	35	33	20	11	11	1	6	5
30-34	97	67	57	41	35	24	28	24
25-29	98	99	85	83	53	42	48	30
20-24	75	92	98	72	79	65	79	46
15-19	55	50	49	74	62	84	60	51
10-14	32	35	56	59	45	54	66	71
5- 9	11	28	30	27	46	44	39	53
0- 4	9	13	28	34	44	41	35	55
-5- -1	9	6	8	17	24	22	35	47
-10- -6	1	3	5	12	20	31	36	20
-15- -11	2			7	16	18	9	26
-20- -16				1	4	13	5	13
-25- -21					2	7	2	4
-30- -26						1		1
-35- -31								
-40- -36								
Total	440	441	442	441	441	447	448	446
Highest	47	49	42	46	38	36	37	37
Lowest	-15	-7	-10	-16	-23	-26	-24	-27
Std. Dev.	9.84	10.15	10.23	11.38	13.13	13.56	12.74	13.35